

APPLICANTS: MARTIN GONZALEZ, et al.
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Amendments to the Claims:

Please cancel claims 1-11. Please add new claims 12-22 as follows.

1-11. (Cancelled)

12. (New) A device for welding by resistance, comprising:

a body base from which extend one or more parallel columns, there being an electrode on at least one of the columns with one pole connected to a welding electric current generator and on at least one column a positioning device for a part to be welded, wherein the electrode is introduced in said positioning device for the compression of said part to be welded onto a second part to be welded against a second electrode;

a spring or expansion element in a rear position to the electrode and coaxial with the axis of movement of the electrode, the spring to exercise the compression force in the welding; and

an intermediary coupling part between the positioning device and the column on which it is positioned.

13. (New) The device according to claim 12, wherein the electrode includes a body with a through hole or housing to guide the column in a sliding manner;
wherein the body includes an internal channel corresponding to a cooling liquid circuit with its corresponding inlet and outlet; and
wherein the electrode body has a rod partially introduced into the positioning device and coaxially arranged with the expansion element, operationally suitable for penetration.

14. (New) The device according to claim 12, wherein the electrode rod includes openings or grooves for air cooling.

15. (New) The device according to claim 12, wherein cooling of the rod is by liquid.

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16. (New) The device according to claim 12, wherein:

the positioning device comprises an axial opening for the passage of the rod, having a lower window for the placement of the part to be welded and a side window for the entry of the part to be welded, going into the inlet of an automatic supply channel;

the positioning device comprises on both sides of the axial opening respective fixing clamps for the part to be welded; and

the positioning device comprises a sensor adjacent to one of its walls to detect the presence of the part to be welded into the correct position on the inside of the axial opening.

17. (New) The device according to claim 16, wherein the axial opening for the passage comprises a guide for the movement of the rod.

18. (New) The device according to claim 12, wherein the positioning device is made from a material for insulation from the electrical current and is heat resistant.

19. (New) The device according to claim 12, wherein the intermediary coupling part comprises an opening in the column through which it is movable; and wherein the column comprises an internal blind opening at its free end, said opening having on the inside an expansion element facing the coupling part for its separation; and wherein the column has, on one side of its contour, a longitudinal groove a limiting pivot slide on the intermediary coupling part to determine the maximum travel of the movement; and wherein the intermediary coupling part comprises a moving casing around the column.

20. (New) The device according to claim 12, wherein the intermediary coupling part comprises a housing for supply conduit of the parts to be welded on the inside of the positioning device; and wherein the entry of the conduit is facing a side window of the axial opening of the positioning device; and wherein the intermediary coupling part comprises a fixing peg for said conduit.

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21. (New) The device according to claim 12, wherein the intermediary coupling part comprises a peg for the positioning device for its rapid removal.

22. (New) The device according to claim 12, wherein the body comprises a coupling to fix to the die or die holder or tool onto which the device is fitted; and wherein the body base comprises a strengthening sheet at its rear in contact with the surface onto which it is attached, to take the forces of compression during the welding.

23. (New) The device of claim 19 wherein the expansion element comprises a spring.

24. (New) The device of claim 19 wherein the expansion element comprises a gas cylinder.

25. (New) The device according to claim 12, wherein the body is shaped to fix to the die or die holder or tool onto which the device is fitted; and wherein the body base comprises a strengthening sheet at its rear in contact with the surface onto which it is attached, to take the forces of compression during the welding.

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